ENVIRONMENTAL STUDIES

The department chose ENVS SLO#2 department-level objective to assess in 2014-15. Rubric B was constructed by a long time instructor of ENVS 303 (Human Ecology and Sustainability), who was not the instructor of the course this year. The rubric (at end) has six criteria and three levels of each, and closely follows footnote 2 from the department’s Assessment plan.

excerpt from plan:

<table>
<thead>
<tr>
<th>Measures</th>
<th>SLO’s Assessed</th>
<th>Use of the Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two approaches will be tried initially: Rubric B-guided rating of student product from ENVS 303; and rating of a program-specific 400-level course product</td>
<td>ENVS 2</td>
<td>Students take different courses from among a few options that contribute to this SLO, which should characterize the department graduates broadly. To determine the pattern of achievement of this SLO the first time it is assessed we will compare a sample of student performance on written products from a department core course (ENVS 303) with a sample of student performance on at least one program-specific 400 level course using the same Rubric. Summaries of results will be reported to the Chair / assessment coordinator by faculty teaching the courses. These data are summarized, shared, and acted upon, as described for other ENVS 1, above. Information may be used to modify required courses, and/or course content, and future assessment decisions.</td>
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</tbody>
</table>

2. Rubric B for assessing student products for ENVS 2 will focus on understanding of natural system concepts, understanding of human system concepts, ability to interpret interactions between these systems at different levels of organization and across space and time, and ability to integrate theoretical perspectives to produce comprehensive and multi-faceted explanations.

METHODS

Essays from ENVS 303 applying theories to analyze human-landuse patterns as documented in Richard White’s environmental history of Washington’s Island County were collected winter term.

Products from the following senior-level courses were collected in the term indicated:
ENVS 484, Amer. Literature of Nature and Place: Final draft nature essays (W2015)
ENVS 462, Planning Theory: Final research papers (F2014)
ENVS 450, US Environmental Policy: Final policy memos (W2015)
ENVS 430, Borderlands: Final research posters (W2015)

(These four courses target our 4 majors: Env. Ed.; Urban Planning and Sust. Devel.; Env. Policy; and Geography, respectively.)

From these collected papers, papers from all Juniors’ papers from 303 were selected (there were only eight in the class. From the other courses, only seniors’ products were selected.

The assessment coordinator assembled four sets of these products to be rated according to the rubric by four faculty members representing the four main programs (Grace Wang, Policy; Pat Buckley, Geography; Nick Zafertos, Planning; and Gene Myers, Env. Education). Each faculty’s set contained a unique set of products except as noted in parentheses:

Four ENVS 303 essays (each of the eight eligible papers was assigned to two faculty)
Three ENVS 484 Nature essays
Three ENVS 462 Planning research papers
Two ENVS 450 Policy memos
One ENVS 430 Research poster

Faculty read and separately rated these materials according to the rubric and then met on June 1 for 1.5 hours to discuss the patterns they found.

RESULTS
1) Almost all of the ENVS 303 essays, although short (2-3 pages ds), approached or exceeded the SLO 2 on the first four criteria of the rubric. In general it was apparent that the assignment and the readings it was based on scaffolded the task as defined by the SLO very closely. Specifically, pieces by Diamond and Liu et al provided concepts that the students employed in interpreting the rich historical material in White. The faculty noted that the fact that the White example refers to local PNW ecologies means that the assignment also supports ENVS SLO 4 in the sense that it helps students interpret real-world using academic contexts. Some 303 essays were weaker on addressing change over time AND space. And most only approached the fifth criterion by applying only one theoretical perspective; that is, few exceeded the standard by using MULTIPLE perspectives. Finally it was noted that, perhaps due to length, the last criterion of “comprehensive and multifaceted” explanation was not met. This section of the rubric was not completed, however, and so this judgment is perhaps more subjective than it might be otherwise. But there was clear agreement.

2) In looking at the other, senior-level, products the faculty quickly concluded that almost none of these diverse assignments was well designed to elicit a performance directly relevant to SLO-2. In designing the ENVS Assessment plan, it had been hoped that existing course products would provide a window to gauge student achievement. In general this was not the case, as they were qualitatively
different and fitted to major-specific goals. The one exception was some of the ENVS 450 policy memos. These were very lengthy, including an extensive background section that required examining natural and human systems and their interactions and change processes as well as a policy recommendation. Thus there was evidence for various parts of the SLO and some of these essays exceeded the SLO on criteria two and three. But in other ways they fell short on systems theory, change, and integration of perspectives.

3) The group then examined the senior-level products from the standpoint not of the content of the SLO (human-natural system interactions), but rather for evidence of more advanced reasoning within the topical area of the course and assignments. That is, given the finding that the ENVS 303 papers lacked somewhat in “using multiple theoretical perspectives,” “comprehensive and multifaceted explanation,” or more generally comparative and sophisticated thinking, could such qualities be discerned in the more advanced students’ products, irrespective of the content? Looked at in this way, there was some evidence. For instance, the planning research papers followed the ways that “theory” is today embodied in application, as pursuant to the values guiding that profession, and the students’ applications were complex. The nature essays required taking the perspective of the reader to produce an effect in the reader, using language arts. The Borderlands posters almost automatically required comparison because they dealt with two national contexts and international institutions. As mentioned the policy memos were comprehensive and multifaceted. That said, none of the products exhibited much comparison using multiple theoretical perspectives.

DISCUSSION
The group of faculty were satisfied to see strong performance by juniors on a task that is very suited to ENVS SLO-1. We are confident they have a good start on this SLO. We do not know how well seniors would do if they were presented with a similarly well-targeted task for this SLO. There is the suggestion that their reasoning might be more sophisticated (where juniors were lacking), assuming they were in possession of appropriate material for this SLO at a more advanced level. We discussed the concept of administering all graduating seniors an exit essay prompt to try to determine this better. It is not clear, however, that that would be worth the effort required. The different majors (at least as represented by this subset of department faculty) do have different notions on the nature of important theory, and what more sophisticated performance looks like. Nonetheless, there was agreement that this SLO represents something very core to our department.

CLOSING-THE-LOOP RECOMMENDATIONS
• ENVS 303 instruction could better support this SLO by prompting students to compare different theoretical lenses in interpreting the White text, as well as the other ways it presently supports SLO-2. The material is in the course, it’s just the cognitive skill and predilection that need to be fostered.
• Each major’s program faculty will be asked to review how their curricula should be instructing theory, and how they are building abilities for more sophisticated, comprehensive and multifaceted understanding of the interdependencies of human and natural systems.
• Among the many methods available, course sequences that build links between theory and application are one route to consider.
• The assessment plan for ENVS SLO-2 needs to be revisited so that a better determination can be made of its senior level achievement across the department.
ENVS SLO2: apply an integrative approach towards understanding human-environment interactions

“Rubric for assessing student products for SLO ENVS 2 will focus on understanding of natural system concepts, understanding of human system concepts, ability to interpret interactions between these systems at different levels of organization and across space and time, and ability to integrate theoretical perspectives to produce comprehensive and multi-faceted explanations.”

<table>
<thead>
<tr>
<th>Elements</th>
<th>Does not meet ENVS SLO2</th>
<th>Approaching ENVS SLO2</th>
<th>Meets or exceeds ENVS SLO2</th>
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</thead>
<tbody>
<tr>
<td>Understanding natural systems concept</td>
<td>Minimal or no description of natural environment</td>
<td>Describes natural environment, but with little evidence of systems thinking, for example, describing individual components in isolation and as stable over time.</td>
<td>Describes natural environment, showing evidence of systems thinking, for example, describing relationships between elements, patterns and processes of change over time, independent of human interaction.</td>
</tr>
<tr>
<td>Understanding human systems concepts</td>
<td>Minimal or no description of society</td>
<td>Describes human society, but with little evidence of systems thinking, for example, describing individuals or groups in isolation and as stable over time.</td>
<td>Describes human society, showing evidence of systems thinking, for example, describing relationships between social groups, patterns and processes of change over time.</td>
</tr>
<tr>
<td>Interpret interactions between human and natural systems</td>
<td>Minimal or no interpretation of ways in which the natural and human systems are linked</td>
<td>Clearly identifies at least one variable linking natural and human components of a human-nature systems (e.g. settlement patterns, consumption, species introduction, deposition, food production, consumption, or waste deposition changing the presence, frequency, and relationship in ecological systems)</td>
<td>Clearly identifies variables linking natural and human components of a human-nature system AND explores features of interaction, such as complex feedback loops, non-linearity, time lags between interaction and observable changes in social or natural system.</td>
</tr>
<tr>
<td>Identify change in human-nature systems</td>
<td>Does not identify change in human-nature system; sees system as static.</td>
<td>Identifies ways in which human-nature system changes over time OR space, but not both.</td>
<td>Identifies ways in which human-nature system changes over time AND space.</td>
</tr>
<tr>
<td>Integrate theoretical perspectives</td>
<td>Perfunctory or no discussion of human-nature systems in light of theoretical perspective</td>
<td>Robust discussion of human-nature system using at least ONE theoretical perspective</td>
<td>Robust discussion of human-nature system using MULTIPLE theoretical perspective</td>
</tr>
<tr>
<td>Provides</td>
<td>??</td>
<td>??</td>
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<tr>
<td>comprehensive and multifaceted explanation</td>
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